

Management of Rabies in Côte d'Ivoire



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Introduction

The annual incidence of rabies is around twenty human cases and ten animal cases in Côte d'Ivoire. FAO provides financial and technical support to the country's National Integrated Rabies Control Program (NIRCP). The national One Health platform has strengthened multidisciplinary collaboration on rabies prevention and control through animal health thematic group meetings. The initial phase of the NIRCP 2018-2030 resulted in the promulgation of Law N°2020-995 of December 30, 2020, on the Veterinary Public Health Code, and its dissemination to the administrative authorities has included regulations on rabies control.

Acknowledgement

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Background

Côte d'Ivoire, like many tropical nations, faces significant health challenges due to the complex interplay of human, animal, and environmental factors. The intricate interconnectedness of these realms underscores the critical need for a One Health approach, a holistic strategy that recognizes the inextricable links between health outcomes across species and ecosystems.

The health landscape in Côte d'Ivoire is influenced by its vulnerability to zoonotic diseases such as rabies, malaria, and Ebola. The One Health approach provides a comprehensive strategy by integrating human health, animal health, and environmental management. This holistic view not only aids in disease prevention and control but also supports biodiversity conservation and food security. Effective management of livestock health is crucial for ensuring nutrition and economic stability, particularly for the significant portion of the population engaged in agriculture.



Furthermore, the health of animals, particularly livestock, directly impacts food security and safety. By ensuring safe food production and consumption, One Health approaches contribute to improved nutrition and economic stability, particularly for the substantial portion of the Ivorian population reliant on agriculture and animal husbandry.

The adoption of a One Health perspective offers several advantages in resource management. Addressing health challenges at their source optimizes resource allocation and promotes efficiency and sustainability. This approach aligns with Côte d'Ivoire's developmental goals, supporting economic growth, poverty reduction, and environmental conservation.

The One Health approach presents a comprehensive and

integrated solution to the multifaceted health challenges facing Côte d'Ivoire. This strategy empowers the nation to safeguard its population, conserve its environment, and achieve sustainable development goals through interdisciplinary collaboration and a focus on health's interconnectedness.

Objectives

The FAO aims are to improve the collection, reporting, and analysis of rabies cases and to enhance its prevention and control measures through vaccination and public education

Implementation

Collaboration:

FAO's support and training of animal health professionals, financial and technical support of the country's National Integrated Rabies Control Program (NIRCP), including administrative authorities and lawmakers, and community engagement.

Activities:

- **Education and Communication:** Distribution of educational materials to raise awareness about rabies prevention.
- **Mass Animal Vaccinations:** In 2022, approximately 10,000 animals were vaccinated, with 93% receiving their primary vaccination in the Gbékè and San-Pédro regions.
- **Training:** Over 760 certified rabies trainers and media personnel were trained.
- **Community Campaigns:** Awareness-raising campaigns reached more than 2,300 people in 2022-2023.

Challenges:

Côte d'Ivoire, like many developing nations, faces significant

obstacles in implementing effective One Health initiatives to combat rabies. These challenges are multifaceted and stem from a confluence of factors, including:

1. **Resource Constraints:** Limited financial resources, a shortage of trained personnel, and inadequate infrastructure often impede the successful implementation of rabies control programs. This lack of resources hampers the ability to conduct surveillance, provide effective vaccination campaigns, and establish robust diagnostic and treatment facilities.
2. **Weak Intersectoral Collaboration:** Effective rabies control necessitates a collaborative approach involving the human health, animal health, and wildlife sectors. However, lacking communication and coordination between these sectors often hinders progress. Insufficient communication channels and a lack of shared data can impede effective program planning and implementation.
3. **Low Public Awareness:** Inadequate public awareness about rabies and its prevention can lead to poor compliance with control measures, such as dog vaccination and responsible pet ownership. This lack of awareness can contribute to an increased risk of transmission and a higher disease burden.
4. **Sociocultural Factors:** Traditional beliefs and practices related to dog ownership and animal care can challenge rabies control efforts. Cultural resistance to vaccination, the use of traditional remedies, and the reluctance to report animal bites can hinder effective prevention and treatment.
5. **Data Scarcity:** Limited data on rabies prevalence and incidence hinders the development of effective planning and evaluation strategies. More data collection and analysis can lead to a better understanding of the disease burden and the impact of control measures, thus hindering the ability to allocate resources effectively.

Results and Impact

Health Improvements:

Early warning and detection have been improved with FAO's support of collecting, reporting, and surveillance tools, such as the Event Mobile Application (EMA-i), veterinary service information collection tools, and training animal health personnel in frontline epidemiology and GIS.

This increased the number of reported and investigated suspected cases of animal rabies by over 240 per cent in 2023.

Mass animal vaccinations (around 10,000 animals, of which 93 per cent were primo vaccinated in the Gbékè and San-Pedro regions in 2022).

The capacities of veterinary laboratories have been strengthened to improve rabies diagnosis through the supply of equipment, reagents, and consumables and participation in inter-laboratory tests. Over the last three years, veterinary laboratories analysed forty samples, of which 80 per cent were positive.

Community Engagement:

Community awareness-raising campaigns reached over 2,300 people in 2022-2023. By maintaining vaccination and awareness, the program will accelerate the elimination of dog-transmitted rabies.

Policy Influence:

The national One Health platform has strengthened multidisciplinary collaboration on rabies prevention and control through animal health thematic group meetings. The initial phase of the NIRCP 2018-2030 resulted in the promulgation of Law N2020-995 of December 30, 2020, on the Veterinary Public Health Code, and its dissemination to the

administrative authorities has included regulations on rabies control.

Lessons Learned

Interdisciplinary Approach:

The interdisciplinary One Health approach in Côte d'Ivoire is crucial for effective rabies control. By bringing together experts from various fields, including veterinary medicine, human health, and public health, these initiatives aim to address the complex factors contributing to rabies transmission. Key aspects include essential collaboration, a holistic approach, community engagement, data-driven decision-making, capacity building, and sustainable financing.

Successful rabies control depends on solid partnerships between government agencies, NGOs, and communities. Addressing both human and animal health is vital in preventing rabies outbreaks. Involving communities in prevention, education, and vaccination programs is essential for long-term success. Collecting and analysing data on rabies cases is crucial for monitoring progress and adapting control strategies. Investing in training and education for healthcare workers, veterinarians, and community members is essential for sustaining rabies control efforts. Adequate and consistent funding is necessary to implement and maintain effective rabies control programs.

By adopting a One Health perspective, Côte d'Ivoire can significantly reduce the burden of rabies on human and animal populations, improving public health and economic development.

Through animal health thematic group meetings, multisectoral collaboration on rabies prevention and control has been strengthened within the national One Health platform.

Sustainability:

The long-term sustainability and scalability of One Health initiatives in Côte d'Ivoire hinge upon a multi-pronged strategy encompassing resource allocation, institutional capacity building, and program replication. This approach is crucial for ensuring the continued effectiveness of rabies control programs beyond the initial project phase.

Resource Allocation and Sustainability:

Securing a stable and predictable funding source is essential to ensure the long-term viability of One Health rabies control programs. This includes exploring diverse funding mechanisms and establishing robust financial planning strategies. Implementing efficient resource allocation strategies is critical to maximize the impact of available resources. This entails conducting cost-benefit analyses, prioritizing interventions based on their efficacy, and ensuring transparent and accountable resource management.

Institutional Capacity Building:

Investing in the training and education of local professionals in relevant disciplines (veterinary medicine, public health, wildlife management) is crucial to building a sustainable workforce. This includes capacity-building programs focused on One Health principles, rabies control techniques, and data management. Strengthening relevant institutions (e.g., Ministries of Health and Agriculture, research institutes, NGOs) is essential for establishing robust governance frameworks and effective program implementation. This involves supporting institutional development, enhancing collaboration between different sectors, and fostering a culture of data-driven decision-making.

Scaling Up and Replication:

Successful One Health rabies control programs must be scaled up to encompass more expansive geographic areas and target populations to achieve a broader impact. This involves

adapting programs to local contexts, addressing geographical and logistical challenges, and fostering community engagement. Sharing best practices and lessons learned from successful programs is crucial for facilitating replication in other regions of Côte d'Ivoire and beyond. This involves documenting program implementation, disseminating findings through peer-reviewed publications and conferences, and establishing knowledge-sharing networks.

By implementing these strategies, Côte d'Ivoire can build a robust and sustainable framework for One Health rabies control, paving the way for a healthier future for humans, animals, and the environment. Ultimately, the program will accelerate the elimination of dog-transmitted rabies by maintaining vaccination and awareness.

Communication:

The successful implementation of One Health initiatives, particularly in a diverse context like Côte d'Ivoire, hinges on robust and effective communication. The intricate web of stakeholders involved, encompassing government agencies, healthcare providers, veterinarians, farmers, and community members, necessitates a strategic approach to communication.

Tailored messaging, a key element of effective communication, requires understanding different target audience's specific needs and knowledge levels. Employing clear and straightforward language ensures that information is accessible and digestible for all. A multi-channel approach, leveraging traditional and social media platforms, maximizes reach and engagement among diverse stakeholders.

Furthermore, communication training is crucial in facilitating knowledge exchange across different sectors. By fostering collaboration and strong partnerships, these training initiatives empower stakeholders to effectively communicate and contribute to the overall success of One Health

initiatives.

A comprehensive communication plan with measurable objectives is essential to ensure accountability and track progress. This plan should outline specific strategies, target audiences, key messages, and evaluation methods to assess the effectiveness of communication efforts. By prioritizing effective communication, One Health initiatives in Côte d'Ivoire can achieve optimal outcomes, contributing to the health and well-being of both human and animal populations.

Conclusion

While the One Health approach is gaining global recognition for its potential to address complex health challenges, the specific impact of its implementation in Côte d'Ivoire remains underexplored. While evidence suggests potential successes, a lack of comprehensive data hinders a thorough assessment. Despite the data gap, the theoretical framework of One Health and the specific context of Côte d'Ivoire point to potential positive outcomes in critical areas:

- 1. Zoonotic Disease Control:** Given the high prevalence of zoonotic diseases in the region, One Health initiatives could have significantly contributed to controlling diseases such as malaria, Ebola, or rabies through enhanced intersectoral collaboration between human and animal health sectors.
- 2. Animal Health and Food Security:** Improvements in animal health facilitated by One Health programs have the potential to directly impact food security, a critical concern in many African nations. One Health intervention could lead to increased livestock productivity and reduced food shortages.
- 3. Ecosystem Health:** By addressing the interconnectedness of human, animal, and environmental health, One Health initiatives could have contributed to improved ecosystem

conservation and sustainable resource management practices

4. **Community Engagement: Successful** One Health implementation often requires strong community engagement. This could translate to increased awareness of health issues, improved healthcare-seeking behaviour, and more vital trust in health authorities in Côte d'Ivoire.

Broader Implications:

The potential success of One Health initiatives in Côte d'Ivoire, or any country, could have far-reaching implications beyond disease control:

- **Economic Impact:** Improved human and animal health can increase economic productivity, contributing to economic growth.
- **Social Equity:** By addressing health disparities, One Health can promote social equity and well-being, ensuring access to healthcare for all segments of society.
- **Global Health Security:** Successful One Health programs can serve as models for other nations, strengthening global health security and fostering international collaboration in addressing health threats.

Moving forward, to gain a comprehensive understanding of the impact of One Health initiatives in Côte d'Ivoire, it is crucial to invest in robust research and evaluation. This necessitates collaboration between government agencies, international organizations, and academic institutions working in the country. Such efforts should focus on **data collection** (Developing standardized data collection methods and indicators to measure the impact of One Health programs across various sectors), **case studies** (conducting in-depth case studies to assess the effectiveness of specific One Health interventions in addressing specific health challenges), and

knowledge dissemination (sharing findings through publications, conferences, and public awareness campaigns to promote the adoption of best practices). By systematically exploring the impact of One Health initiatives in Côte d'Ivoire, we can gain valuable insights into its potential to improve health outcomes and contribute to sustainable development in the region and beyond.

Multiple Choice Questions

Earn 1 HPCSA or 0.25 SACNASP CPD Points
– [Online Quiz](#)

Thought Questions

- What are the primary challenges hindering the effective implementation of rabies control programs in Côte d'Ivoire, and how have these challenges impacted the reduction of human and animal rabies cases?
- How has community engagement been integrated into rabies control efforts in Côte d'Ivoire, and what strategies have been most successful in promoting behaviour changes related to dog ownership, vaccination, and bite prevention?
- What is the current state of rabies surveillance in Côte d'Ivoire, and how effectively is data being used to inform and optimize rabies control strategies?

References

Food and Agriculture Organization of the United Nations. (n.d.). Rabies case studies. FAO. Retrieved August 5, 2024, from

<https://www.fao.org/one-health/highlights/rabies-case-studies/>

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